

MR2707-5

Serial No.: 10/006,124

Response to Official Action dated 13 June 2005

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listing of claims in the application:

LISTING OF CLAIMS:

1. (Currently amended) An integrated speech synthesizer with an automatic identification of speaker connections comprising:
 - a sound encode register for storing encoded digitized sound data;
 - a first ~~speech-synthesis~~ digital to analog converter unit connected to said sound encode register for converting said digitized sound data from said sound encode register to a first analog signal and sending out said first analog signal through a first output terminal;
 - a second ~~speech-synthesis~~ digital to analog converter unit connected to said sound encode register for converting said digitized sound data from said sound encode register to a second analog signal and sending out said second analog signal through a second output terminal and said first output terminal; and
 - a state register connected to said first output terminal for detecting and storing a connection state of said first output terminal before said speech synthesizer is enabled, said state register having an output coupled

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to said sound encode register, said first digital to analog converter unit and said second digital to analog converter unit to thereby [[:]]
~~wherein said speech synthesizer is automatically set up with an initial value in~~
reference to said state stored in said state register for said first and
second digital to analog converters.

2. (Cancelled).

3. (Currently enabled) An integrated speech synthesizer according to claim
[[2]] 1 wherein said state register detects said first output terminal is in a high
impedance state before connected to a speaker said speech synthesizer is enabled
responsive to a speaker being coupled between said first and second output
terminals.

4. (Currently amended) An integrated speech synthesizer according to claim
[[3]] 1 wherein said state register detects said first output terminal is in a low level
and said first before said speech synthesis unit can be synthesizer is enabled when
responsive to a drive circuit for said a speaker is being connected to said first
output terminal only.

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5. (Currently amended) An integrated speech synthesizer according to claim 1 wherein said second ~~speech-synthesis~~ digital to analog converter unit is a direct drive type speech synthesis unit.

6. (Currently amended) An integrated speech synthesizer according to claim 5 wherein said second ~~speech-synthesis~~ digital to analog converter unit is a push-pull type ~~speech-synthesis~~ digital to analog converter unit.

7. (Cancelled).

8. (Currently amended) An integrated speech synthesizer according to claim [[7]] 1 wherein said second output terminal is in a high level before said speech synthesizer is enabled.

9. (Cancelled).

10. (Currently amended) A method for automatic identification of speaker connections to an integrated speech synthesizer with a ~~PCM and direct drive type~~ speech-synthesis pair of digital to analog converter units, a first of said ~~PCM~~ speech-synthesis pair of digital to analog converter units ~~enable to sending out a~~ first analog signal from a first output terminal, a second of said pair of digital to

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~~analog converter said direct drive type speech synthesis units enable to sending out~~
a second analog signal from a second output terminal and said first output
terminal, said method comprising:

setting said first output terminal to a high impedance state prior to input of
digital speech signals to said pair of digital to analog converter units;
sending out a preset voltage from said second output terminal;
detecting and storing a state of said first output terminal with a state register
having an input coupled thereto, the detection and storing step
occurring prior to said input of the digital speech signals before said
~~speech synthesizer is enabled; and~~
setting up ~~said speech synthesizer with~~ an initial value input to said pair of
digital to analog converter units responsive to in-reference to said
detected state stored in said state register.

11. (Original) A method according to claim 10 wherein said preset voltage is high,

12. (Currently Amended) A method according to claim 10 wherein the step of
detecting and storing includes the step of setting a flag to indicate said first output
~~terminal is in a low level and said first speech synthesis unit can be enabled when~~
a drive circuit for ~~said a~~ speaker is connected to only said first output terminal

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only responsive to a low level being detected at said first output terminal prior to said input of digital speech signals.

13. (Currently amended) A method according to claim 10 wherein the step of detecting and storing includes the step of setting a flag to indicate a said first output terminal is in a high level and said direct drive type speech synthesis unit can be enabled when said speaker is connected to said first and second output terminals responsive to a high level being detected at said first output terminal prior to said input of digital speech signals.